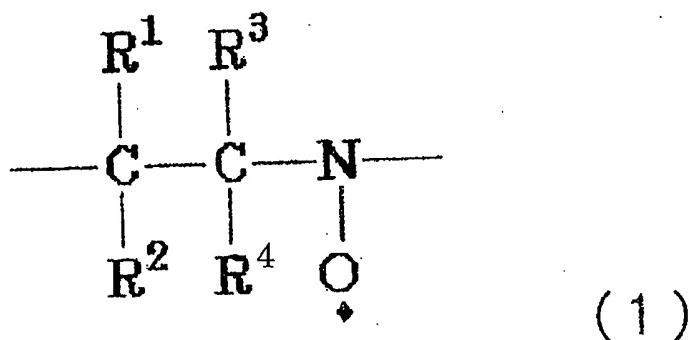
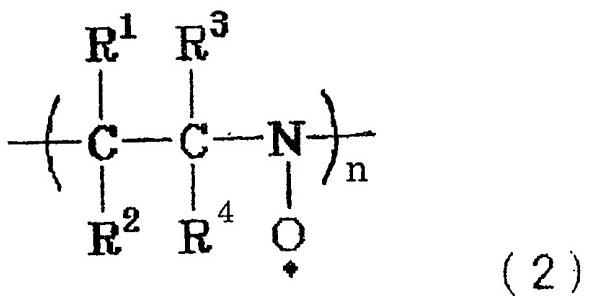


What is claimed is :

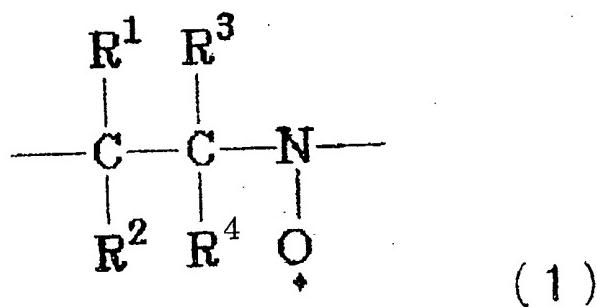
1. A secondary battery having at least a positive electrode, a negative electrode, and an electrolyte, wherein the secondary battery includes a polymer having a repeating unit represented by formula (1) as an active material of at least one of the positive electrode and the negative electrode.
- 5



- 10 1. According to formula (1), R1, R2, R3 and R4 each independently represents hydrogen atom, substituted or unsubstituted alkyl group, substituted or unsubstituted aromatic hydrocarbons, substituted or unsubstituted heteroaromatic groups, halogen atom, or alkylene group that may be coupled to the ring form at least one or both of R1 and R3, R2 and R4.
- 15
2. The secondary battery according to claim 1 contains the polymer as a positive electrode active material.
- 20 3. The secondary battery according to claim 1, wherein the secondary battery is a lithium secondary battery.
- 25 4. A secondary battery having at least a positive electrode, a negative electrode, and an electrolyte, wherein the secondary battery includes a polymer represented by formula (2) as an active material of at least one of positive electrode and negative electrode.



- According to formula (1), R1, R2, R3 and R4 each independently represents hydrogen atom, substituted or unsubstituted alkyl group, substituted or unsubstituted aromatic hydrocarbons, substituted or unsubstituted heteroaromatic groups, halogen atom, or alkylene group that may be coupled to the ring form at least one or both of R1 and R3, R2 and R4.
- 5      5. The secondary battery according to claim 4 containing the polymer as a positive electrode active material.
- 10     6. The secondary battery according to claim 4, wherein the secondary battery is a lithium secondary battery.
- 15     7. A secondary battery containing a polymer having a repeating unit represented by formula (1) as a reactant or product of at least one of electrode reaction of positive electrode and negative electrode.



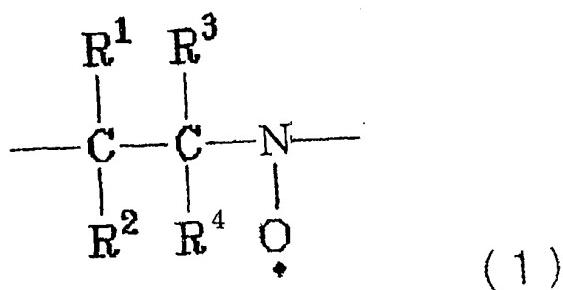
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According to formula (1), R1, R2, R3 and R4 each independently represents hydrogen atom, substituted or unsubstituted alkyl group, substituted or unsubstituted aromatic hydrocarbons, substituted or unsubstituted heteroaromatic groups, halogen atom, or alkylene group that may be coupled to the ring form at least one of or both of R1 and R3, R2 and R4.

5        8. The secondary battery according to claim 7 containing the polymer as a reactant or product of the positive electrode reaction.

10      9. The secondary battery according to claim 7, wherein the secondary battery is a lithium secondary battery.

15      10. A secondary battery of at least one of electrode reaction of positive electrode and negative electrode containing a chemical compound obtained by forming a polymer having a repeating unit represented by formula (1).



20      According to formula (1), R1, R2, R3 and R4 each independently represents hydrogen atom, substituted or unsubstituted alkyl group, substituted or unsubstituted aromatic hydrocarbons, substituted or unsubstituted heteroaromatic groups, halogen atom, or alkylene group that may be coupled to the ring form at least one or both of R1 and R3, R2 and R4.

25      11. The secondary battery according to claim 10, wherein the chemical compound is contained in the positive electrode.

12. The secondary battery according to claim 10, wherein the secondary battery is a lithium secondary battery.